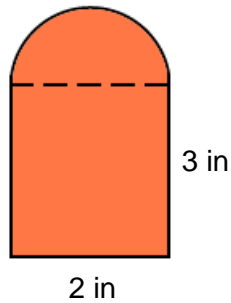


Area of Composite 2D Shapes**1. Determine the Area of a Composite Shape by "Adding"**

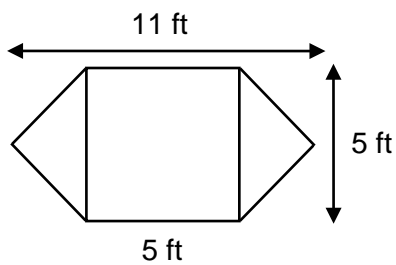
(a)



$$\begin{aligned}
 A_{\text{Total}} &= A_{\text{Rectangle}} + A_{\text{Semi-Circle}} \\
 &= lw + \frac{\pi r^2}{2} \\
 &= (3)(2) + \frac{(\pi)(1)^2}{2} \\
 &= 6 + 1.57 \\
 &= 7.57
 \end{aligned}$$

The area is 7.57 in².

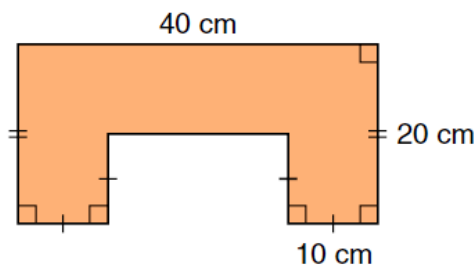
(b)



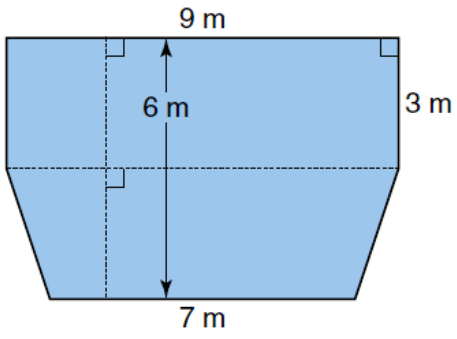
$$\begin{aligned}
 A_{\text{Total}} &= A_{\text{Square}} + A_{\text{Triangle}} + A_{\text{Triangle}} \\
 &= s^2 + \frac{bh}{2} \times 2 \\
 &= (5)^2 + \frac{(5)(3)}{2} \times 2 \\
 &= 25 + 15 \\
 &= 40
 \end{aligned}$$

The area is 40 ft².

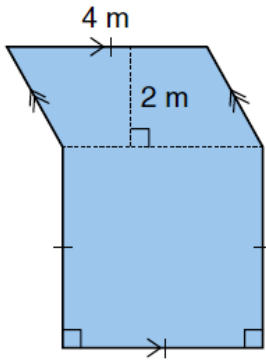
(c)



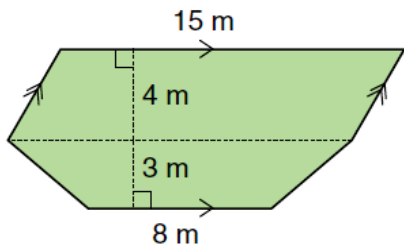
(d)



(e)

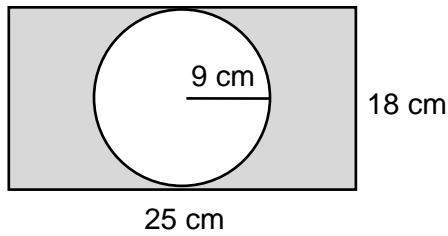


(f)



2. Determine the Area of a Composite Shape by "Subtracting"

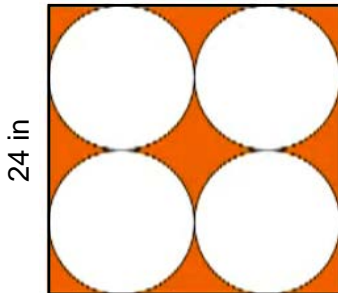
(a)



$$\begin{aligned}
 A_{\text{Total}} &= A_{\text{Rectangle}} - A_{\text{Circle}} \\
 &= lw - \pi r^2 \\
 &= (25)(18) - (\pi)(9)^2 \\
 &= 450 - 254.47 \\
 &= 195.53
 \end{aligned}$$

The area is 195.53 cm².

(b)

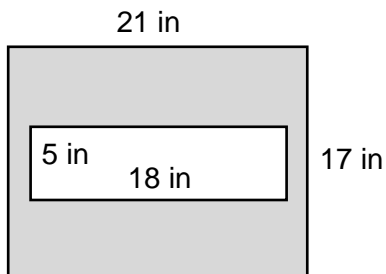


Note: Side length of Square = Twice the Diameter of Circle

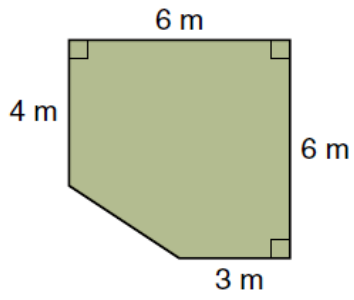
$$\begin{aligned}
 A_{\text{Total}} &= A_{\text{Square}} - A_{\text{Circle}} \times 4 \\
 &= s^2 - \pi r^2 \times 4 \\
 &= (24)^2 - (\pi)(6)^2 \times 4 \\
 &= 576 - 113.10 \times 4 \\
 &= 123.60
 \end{aligned}$$

The area is 123.60 in².

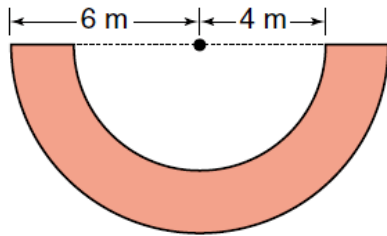
(c)



(d)



(e)



(f)

